Storm & Surface Water

Bellevue's Storm & Surface Water system includes networks of streams, lakes, pipelines, storm water runoff control, and water quality facilities. Ongoing Utility objectives for the system include managing stream flows and flooding; limiting stream bank erosion; replacing undersized and/or deteriorating pipelines; reducing sedimentation and other water quality problems; and preserving or restoring aquatic wildlife habitat. Bellevue Storm & Surface Water Utility owns, operates and maintains 11 regional detention facilities, 340 neighborhood detention facilities, and monitors nearly 1,000 commercial detention facilities. Storm water is conveyed via 410 miles of pipelines, 86 miles of open ditch, and nearly 79 miles of open streams. The system includes over 22,000 structures such as manholes and catch basins that require regular maintenance and eventual retrofit/replacement.

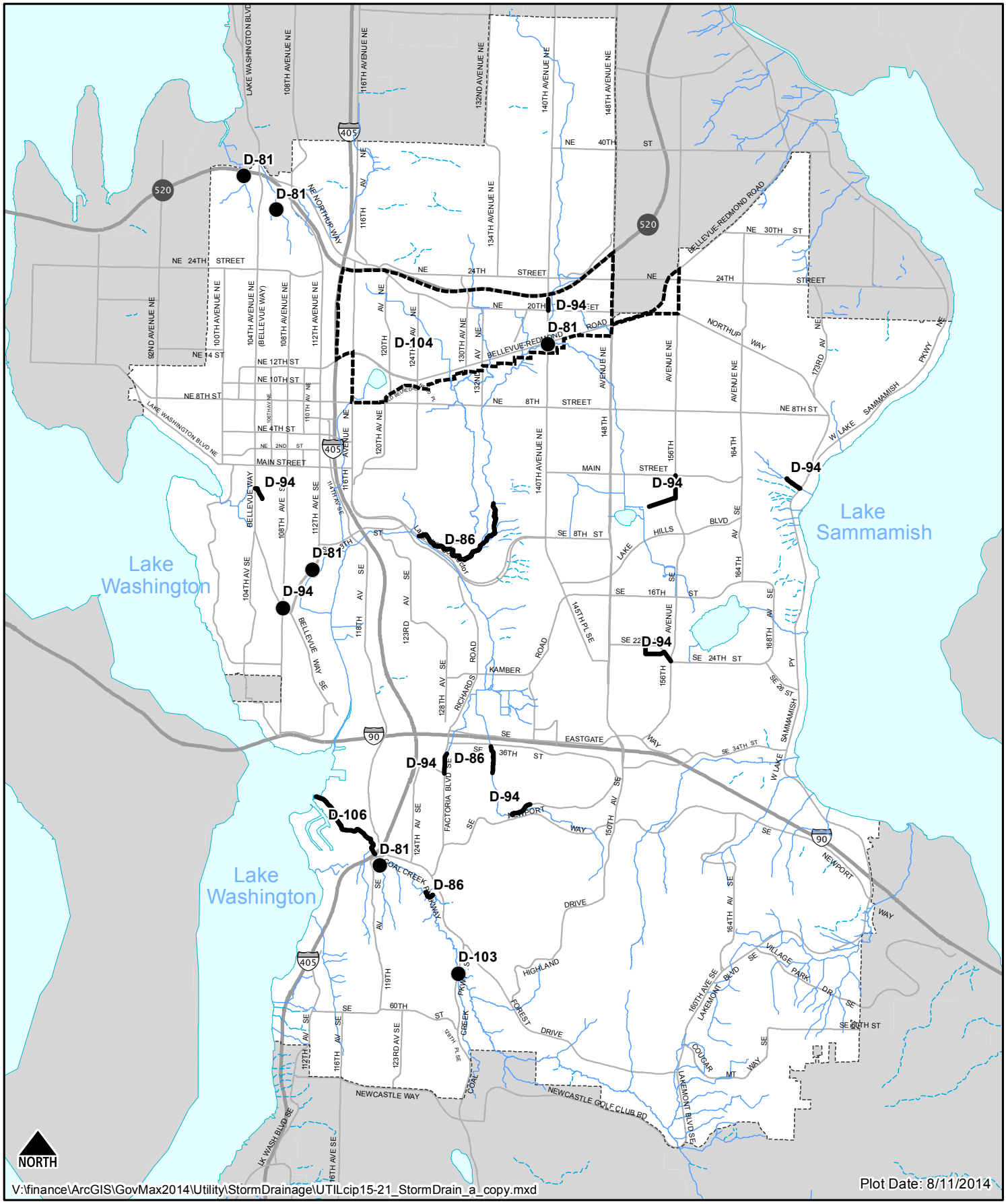
The Utility's capital construction projects are implemented under the Comprehensive Drainage Plan (CDP). An update to the Comprehensive Drainage Plan is now underway. Drainage basin studies, storm events, maintenance staff, and citizen input identify additional system needs. A citywide assessment of the storm drainage system ensures that capital dollars are directed to the highest priority and most pressing needs. Updating the Capital Investment Program includes review of known system needs, evaluation of project merit and priority, and preparation of new cost estimates.

The 2015-2021 CIP Plan recognizes that significant investments are needed to maintain aging systems and replace components that are reaching the end of their useful life. The Plan includes a number of investments that are necessary to meet system capacity and infrastructure renewal needs as a response to growth and demand in the system. The plan also includes a program to restore streams in the Bel-Red Corridor as that area redevelops.

2015-2021 Adopted CIP: Storm Drainage

Funded CIP Projects

CIP Plan Number	Project Name	$ in 000s 2015-2021 Project Cost	Total Estimated Cost
D-59	Minor (Small) Storm Capital Improvement Projects	1,217	3,227
D-64	Storm System Conveyance Repairs and Replacement	7,841	19,862
D-81	Fish Passage Improvement Program	2,372	5,963
D-86	Stream Channel Modification Program	2,320	6,691
D-94	Flood Control Program	8,109	13,863
D-103	Replace Coal Creek Pkwy Culvert at Coal Creek	44	5,504
D-104	Stream Restoration for Mobility & Infrastructure Imitative	8,333	14,372
D-105	Replace NE 8th St Culvert at Kelsey Creek	3,547	3,547
D-106	Lower Coal Creek Flood Hazard Reduction Phase I	7,629	8,096
D-107	Storm Water Video Inspection Enhancement	2,503	2,503
D-108	East Link Utility Relocations	3,145	3,145
	TOTAL STORM DRAINAGE	$ 47,060	$ 86,773



2015-2021

Storm Drainage CIP Projects

Note: Projects D-59, D-64, and D-107 are not shown as they will be located throughout the service area. D-108 located throughout the East Link corridor.

D-59 Minor (Small) Storm Capital Improvement Projects

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Various locations throughout the City**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
3,226,677	2,009,677	163,000	167,000	170,000	174,000	177,000	181,000	185,000

Description and Scope

This ongoing program is for minor (small) improvements to Bellevue's surface water system to resolve deficiencies, improve efficiencies, or resolve maintenance problems, often in conjunction with other Bellevue programs such as the Transportation overlay program. Examples of projects include pipeline outfall improvements at Meydenbauer Bay; small stormwater pipe extensions to resolve drainage problems; and modifications of catch basins in concert with street projects. Projects are prioritized based on criteria including public safety/property damage, maintenance frequency, flooding history, operator safety, environmental risk, coordination with other city or development activity, and level of service impact.

Rationale

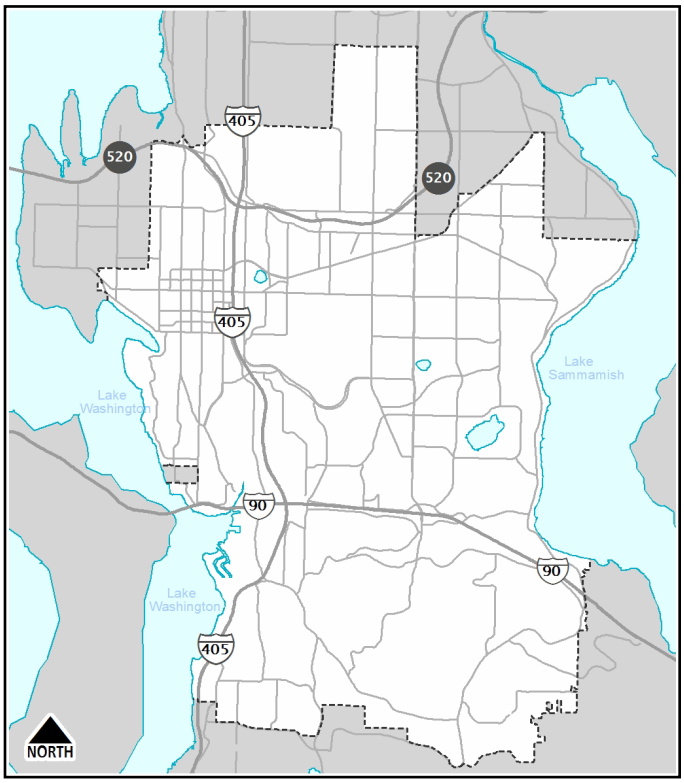
These improvements correct unanticipated small deficiencies or maintenance problems in the storm utility system. Projects reduce maintenance costs and potentially alleviate flooding, erosion, and water quality problems throughout the city. The program allows the City to efficiently maintain and upgrade its storm system by coordinating minor improvements with other City projects and maintenance activities. These projects are too small to justify their own CIP projects, don't fit within the scope of other storm CIP programs, and sometimes can't be anticipated. The budget is based on average historical need. The program provides the ability to respond to unanticipated system problems, adds flexibility to resolve problems cost effectively when discovered during the course of other city projects, often reduces maintenance requirements and extends component service life.

Environmental Impacts

The environmental impacts will be determined for specific projects when they are identified, but are usually not significant.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	1995 - 2021	3,226,677
Total Budgetary Cost Estimate:		3,226,677

Means of Financing

Funding Source	Amount
Miscellaneous Revenue	1,000
Utility Rates/Fees	3,225,677
Total Programmed Funding:	3,226,677
Future Funding Requirements:	

Comments

D-64 Storm System Conveyance Repairs and Replacement

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Various locations throughout the City**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
19,862,231	12,021,231	937,000	963,000	1,031,000	1,104,000	1,184,000	1,266,000	1,356,000

Description and Scope

This ongoing program repairs defective storm drainage pipelines, culverts and ditches identified in the Utility's condition assessment program or other means. Projects are prioritized based on the severity of deterioration, the risk and consequence of failure, and coordination with planned street improvement projects. As the system ages, costs are expected to increase. The Utilities' Asset Management Program is evaluating when system replacement will require significant increases to the budget.

Rationale

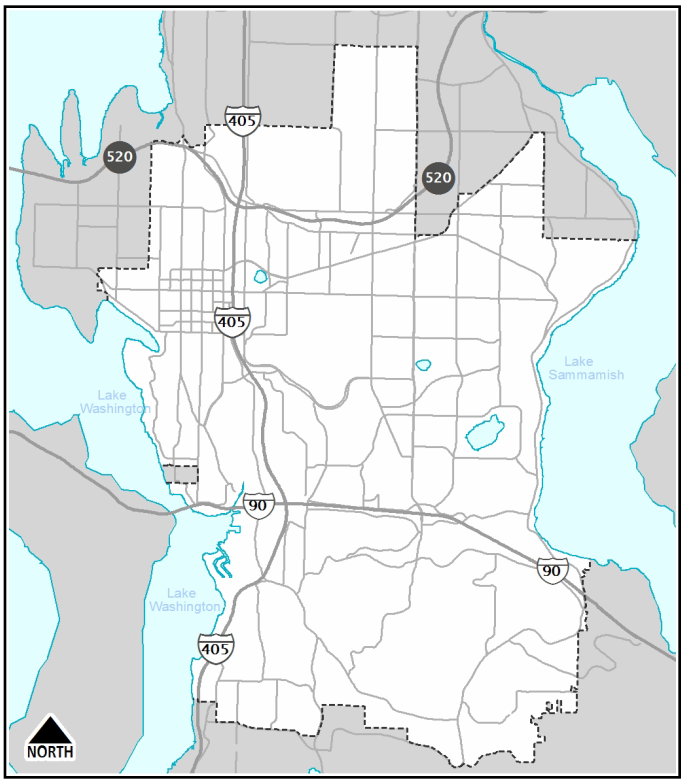
Much of the storm pipe network was built before pipe material and construction standards were in place, so there is only limited information about when pipes were installed, their size and composition. Bellevue owns almost 400 miles of stormwater conveyance pipe, with limited information available to predict how long it will last. Of particular concern is corrugated metal pipe, which can completely corrode away in as little as 20 years. Pipe collapse or blockage can result in washed-out roads, flooded homes, environmental damage, and traffic disruption. This program provides for repair or replacement of defective stormwater conveyance pipes, culverts and ditches, to prevent such consequences. It proactively repairs pipes under arterials in advance of street resurfacing, saving costs and minimizing disruption. It also focuses on critical pipes where the consequences of failure would be significant. Funding is proposed to increase by 5% per year (over inflation) starting in 2017, to accommodate anticipated increase in defects discovered after the video inspection program (D-107) increases.

Environmental Impacts

The environmental impacts will be determined for each specific project, but are usually minor.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	1995 - 2021	19,862,231
Total Budgetary Cost Estimate:		19,862,231

Means of Financing

Funding Source	Amount
Judgements/Settlements	33,000
Miscellaneous Revenue	680,000
Utility Rates/Fees	19,149,231
Total Programmed Funding:	19,862,231
Future Funding Requirements:	

Comments

D-81 Fish Passage Improvement Program

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Various fish production streams throughout the City**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
5,962,895	3,590,895	752,000	201,000	421,000	413,000	196,000	366,000	23,000

Description and Scope

This ongoing program provides funding to remove fish passage barriers such as impassable culverts, debris jams, or accumulated sediment, allowing access to critical spawning and rearing habitat for salmon populations. Typical projects include culvert replacement or modification, debris removal, or installation of logs and boulders to improve access at low stream flows. Grant money is pursued to supplement Bellevue's investment whenever possible. Projects planned for this CIP window are on Kelsey Creek at 140th Ave NE; on Yarrow West Tributary; on Newport Creek; at Mercer/Alcove Creek, and on Yarrow East Tributary.

Rationale

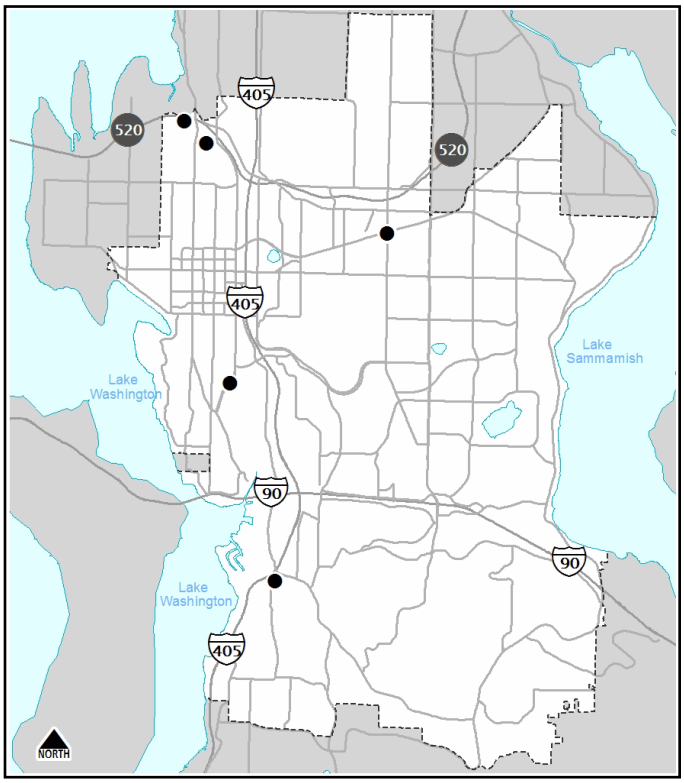
State standards for culvert replacement are becoming increasingly stringent. This program allows salmon access to existing functional habitat, one of the quickest methods to increase salmon populations. It supports the community's vision for fishable waters, and regional efforts to protect and enhance salmon populations. Bellevue is obliged by state law to provide fish passage at all road crossings. Historically, enforcement of the regulations has occurred primarily when modifications were needed at road culverts.

Environmental Impacts

Projects in this ongoing program will increase the potential for erosion and siltation during construction. An environmental checklist (SEPA) and Critical Areas permit, a Hydraulic Project Approval from the Washington Department of Fish and Wildlife, and US army corp permits are typically required. Riparian vegetation will be removed and replaced in order to construct the improvements. New fish passage designs allow stream processes, such as movement of wood and sediment, to occur more naturally.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2000 - 2021	5,962,895
Total Budgetary Cost Estimate:		5,962,895

Means of Financing

Funding Source	Amount
Federal Grants	50,000
Interlocal Contributions	50,000
Judgements/Settlements	135,000
Miscellaneous Revenue	1,000
Utility Rates/Fees	5,726,895
Total Programmed Funding:	5,962,895
Future Funding Requirements:	

Comments

D-86 Stream Channel Modification Program

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Various - Identified by habitat assessment program**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
6,690,568	4,370,568	85,000	231,000	338,000	675,000	531,000	427,000	33,000

Description and Scope

This ongoing program resolves unstable stream sections that reduce salmon spawning or rearing habitat or increase Bellevue Utilities maintenance requirements. Stream stability problems include stream sections with excessive erosion or sediment deposition. This program also improves habitat complexity by planting coniferous trees to reduce willow mono-culture or invasive weed species. Stabilizing the stream channel consists primarily of placing large woody debris and boulders in the stream channel, and re-vegetating stream banks, commonly called bioengineering. Projects planned in this CIP window include projects on Lower Kelsey Creek, at the Coal Creek Channel, and erosion control in the Sunset Creek ravine.

Rationale

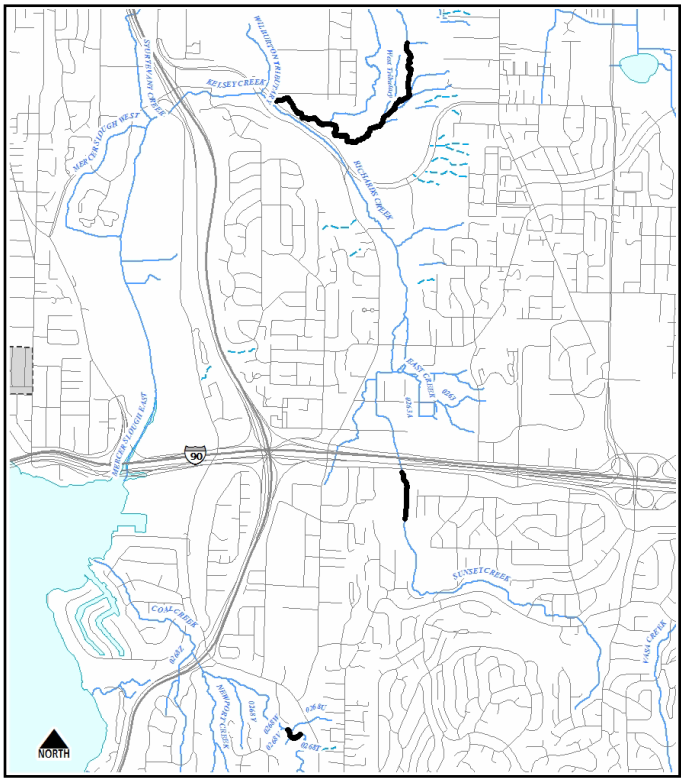
This ongoing program helps stabilize streams and improve habitat consistent with the Council-approved Lake Washington/Cedar/Sammamish Chinook Salmon Recovery Plan. Stream projects are prioritized based on habitat potential, degree of channel instability, stream environmental diversity, and are only constructed where there is a public obligation. The budget allows construction of approximately 430 feet of stream work/yr; a minimal rate that allows reasonable progress on the highest priority locations. The program increases opportunities for citizens to enjoy fish and other riparian species in the 70+ miles of open streams that meander through their neighborhoods, and reduces the likelihood of localized landslides that can jeopardize structures, cause flooding, and block fish access.

Environmental Impacts

Projects in this ongoing program would temporarily increase the potential for erosion and siltation during construction. An environmental checklist and a Hydraulic Project Approval from the Washington Department of Fish and Wildlife would be required. Riparian vegetation would be removed to construct channel improvements. Once constructed, the projects would improve the riparian and stream environments by reducing sedimentation and erosion.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	1999 - 2021	6,690,568
Total Budgetary Cost Estimate:		6,690,568

Means of Financing

Funding Source	Amount
Interlocal Contributions	65,000
Judgements/Settlements	40,000
Miscellaneous Revenue	1,000
Utility Rates/Fees	6,584,568
Total Programmed Funding:	6,690,568
Future Funding Requirements:	

Comments

D-94 Flood Control Program

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Various locations throughout the City**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
13,862,973	5,753,973	1,113,000	725,000	1,248,000	1,519,000	1,914,000	939,000	651,000

Description and Scope

This ongoing program constructs improvements to reduce or eliminate flooding caused by insufficient public drainage system capacity. Projects involve enlarging pipes or culverts to convey more stormwater, re-routing drainage to pipes with more capacity, adding detention or infiltration facilities, or other runoff control strategies. Candidate sites are wherever levels of service (LOS) for flood protection are not met. The following sites have projects in progress or have been identified for future improvements, and are presented in priority order. They will be prioritized for implementation with any others that become apparent as a result of storm or system analysis:

1. Valley Creek / NE 21st Flood control (in progress)
2. Post construction monitoring on Coal Creek Upper Reach, Lower Coal Creek Sed. Pond, Sunset / SE 30th St Flood Control
3. Factoria Boulevard Conveyance Improvements
4. Meydenbauer Basin / CBD Conveyance Improvements
5. Wolverine Drive Flood Control Project
6. North Sammamish Flood Improvements
7. Overlake Overflow / NE 20th Street Improvements
8. Sunset Creek / Garden Brook
9. 156th Ave SE & SE 4th St. Storm Drainage Improvements
10. Phantom / Larson Lake Channel Regrade

The SE Newport Way Culvert Replacement Project previously on this list has been deleted. King County completed repairs at the site prior to Bellevue's annexation of the area. Kelsey Creek/SE 7th Street Flood Control was also removed from the list. Field investigation suggests that enhanced maintenance at that site may result in significant improvement. If further channel or culvert work is needed, it will be considered for addition to the project list during a future CIP update.

Rationale

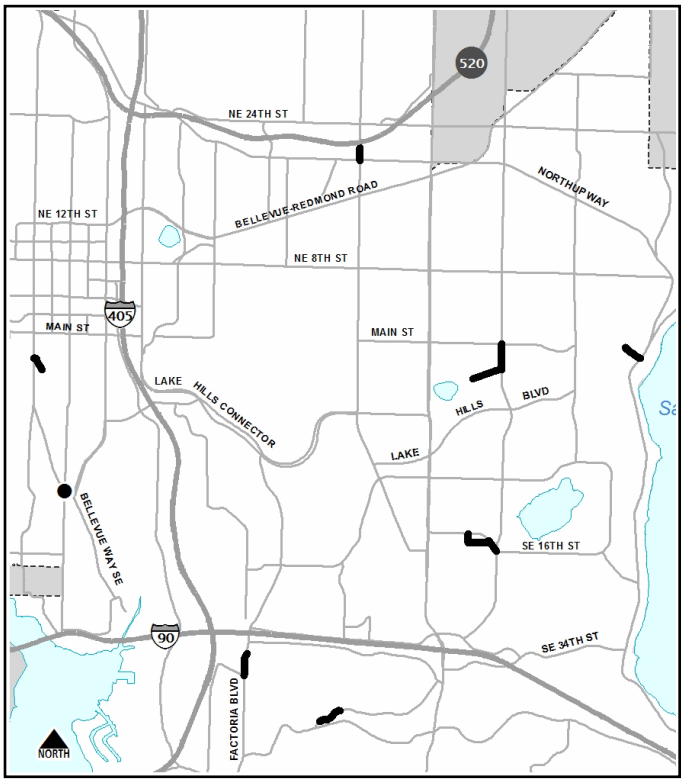
Established level-of-service targets for protection from flooding are intended to prevent flooding of structures, flooding which restricts access to residences or businesses, or street flooding, particularly on primary emergency. Such flooding impacts public safety and causes property damage. Proposed flood control projects are prioritized based on risk (frequency and consequence of flooding) and are completed as resources are available. King Co Flood Control Zone District contributions supplement local rate revenue to fund this project.

Environmental Impacts

An environmental determination will be made in conjunction with preliminary design of each project within this program. Reduced flooding will result in less environmental damage associated with erosion and sedimentation, and other flood-related damage.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2005 - 2021	13,862,973
Total Budgetary Cost Estimate:		13,862,973

Means of Financing

Funding Source	Amount
Interlocal Contributions	6,970,198
Utility Rates/Fees	6,892,775
Total Programmed Funding:	13,862,973
Future Funding Requirements:	

Comments

D-103 Replace Coal Creek Pkwy Culvert at Coal Creek

Category: **Storm Drainage**
Status: **Ongoing**
Department: **Utilities**
Location: **Coal Creek, at Coal Creek Parkway**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
5,504,250	5,460,250	10,000	5,000	5,000	6,000	6,000	6,000	6,000

Description and Scope

This project will replace a 96-inch diameter, 110 foot long corrugated metal pipe built in the 1980s, that carries Coal Creek beneath Coal Creek Parkway. The current culvert impedes fish passage; resource agencies will likely require the new design to be designed for fish passage. The metal pipe will be replaced with a 39' wide box culvert that will also accommodate a new walking path under the roadway adjacent to the stream . Site monitoring for ten years after the project completion is included in the budget.

Rationale

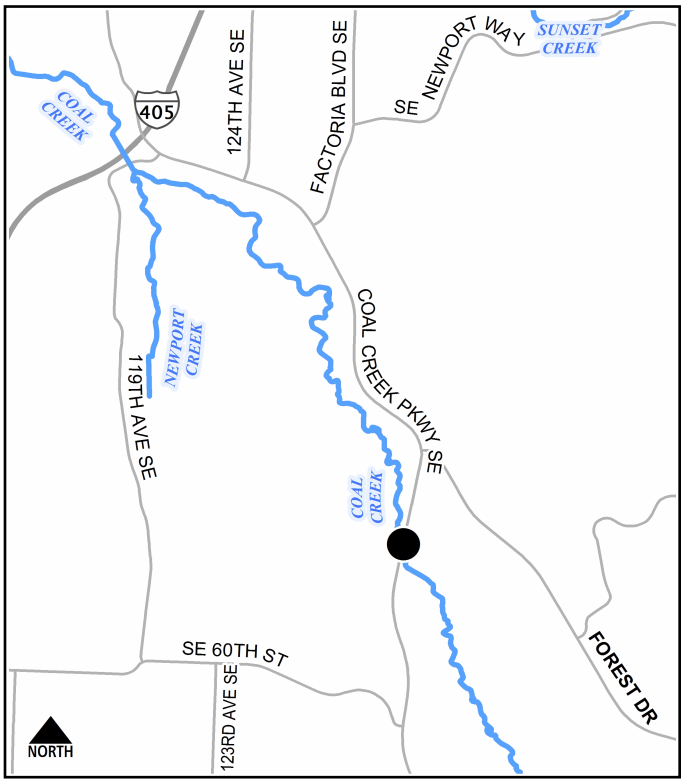
Inspections revealed the pipe was heavily corroded, with limited remaining structural integrity. Holes in the bottom of the culvert allowed water to leak through, threatening the integrity of Coal Creek Parkway and the two high pressure fuel pipelines that pass near the pipe. Rehabilitation of the existing culvert was not feasible; engineers estimated the remaining culvert life at less than 5 years. This project prevented eventual culvert collapse, which would have had catastrophic consequences to Coal Creek Parkway and Coal Creek, including the possible destruction of earlier projects to enhance stream stability and downstream flooding of homes. A catastrophic culvert collapse and the damage to multiple important utility facilities would have ripple effect throughout the region, affecting air travel and surface transportation along with serious environmental impacts.

Environmental Impacts

The project required SEPA review to identify environmental impacts and appropriate mitigation during construction. Following construction, the new box culvert improves fish passage and stream habitat. The new culvert has a much lower chance of failure, which could damage the sensitive area in and around Coal Creek.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2009 - 2021	5,504,250
Total Budgetary Cost Estimate:		5,504,250

Means of Financing

Funding Source	Amount
Utility Rates/Fees	5,504,250
Total Programmed Funding:	5,504,250
Future Funding Requirements:	

Comments

D-104 Stream Restoration for Mobility & Infrastructure Initiative

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Bel-Red Corridor**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
14,372,287	6,039,015	1,613,103	1,854,702	2,231,300	2,634,167	-	-	-

Description and Scope

This ongoing program is for stormwater improvements associated with the Mobility and Infrastructure Initiative (which seeks to address high priority mobility and infrastructure needs in Downtown Bellevue and in the Bel-Red Corridor). These funds are to restore streams for recreation and environmental health through the Bel-Red corridor, and to encourage redevelopment of the area. These funds will be allocated to specific stormwater-related projects pending further Council direction. Two projects are proposed for implementation in 2014-2016: Channel Restoration pre-design studies on the West Tributary downstream of the West Trib. Regional Pond, and Native Plant Restoration at the West Tributary Regional Pond. The projects will need to be constructed to coordinate with Sound Transit wetland and stream mitigation, and 124th Phase 1 project, respectively.

Rationale

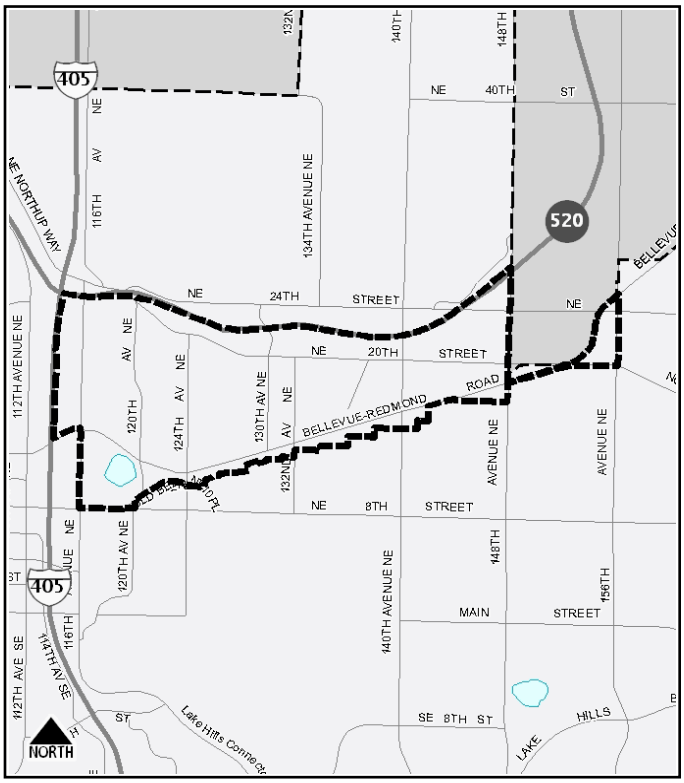
New urban residential neighborhoods planned for Bel-Red require investments in stream restoration and open spaces that support high quality, livable places. Public investment in these improvements will pave the way for pioneer housing development in the transitioning area. Most streams in this historically industrial part of Bellevue flow through pipes under parking lots, roads, and even buildings. This program will provide funds for restoration of the West Tributary and Goff Creeks (property acquisition by others) and replacement of the fish-blocking culverts on those creeks under Bel-Red Rd. The replaced culverts will allow fish access to the newly opened habitat upstream.

Environmental Impacts

Each project funded by this initiative will be assessed for environmental impact. Projects funded by this proposal are intended to improve stream health and habitat restoration, resulting in positive environmental impact.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2009 - 2018	14,372,287
Total Budgetary Cost Estimate:		14,372,287

Means of Financing

Funding Source	Amount
Mobility & Infrastructure Initiative - Utility Rate/Fee	14,372,287
Total Programmed Funding:	14,372,287
Future Funding Requirements:	

Comments

D-105 Replace NE 8th St Culvert at Kelsey Creek

Category: **Storm Drainage** Status: **Approved and Begun**
Department: **Utilities** Location: **Kelsey Creek, at NE 8th St**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
3,547,000	-	110,000	226,000	231,000	1,178,000	1,785,000	11,000	6,000

Description and Scope

This project will replace the existing 10' wide by 7' tall, 110-foot long corrugated metal culvert built in the early 1980s that carries Kelsey Creek beneath NE 8th Street. To meet flood and fish passage requirements, the culvert will be replaced with a bridge which spans the creek channel, or a three-sided concrete box culvert with an approximate 15 foot span. The design will be determined by permit requirements.

Rationale

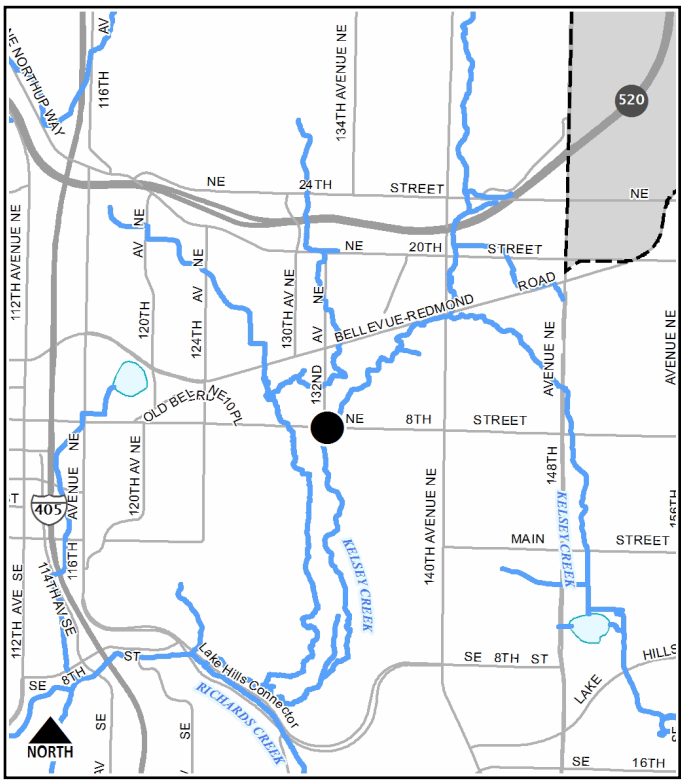
Investigation in the summer of 2011 revealed much of the culvert bottom to be corroded, including some areas where the metal bottom was completely gone. Temporary repairs were made in 2011 to stabilize the culvert by adding a layer of reinforced concrete at the base of the arch. This provided protection against further corrosion and added some structural support. The culvert is still in need of replacement to prevent failure from continued deterioration. Culvert failure at this location could damage adjacent utilities, degrade stream water habitat, and ultimately cause damage to the roadway. The project schedule has been adjusted to reflect anticipated permit-monitoring requirements following construction. Construction schedule will be coordinated with water main replacement work in NE 8th (W-103).

Environmental Impacts

The project will require SEPA review to identify environmental impacts and appropriate mitigation. When completed, the new culvert will improve fish access and riparian habitat; reduce the opportunity of structural failure with associated erosive damage; and reduce the opportunity for flooding.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2015 - 2021	3,547,000
Total Budgetary Cost Estimate:		3,547,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	3,547,000
Total Programmed Funding:	3,547,000
Future Funding Requirements:	

Comments

D-106 Lower Coal Creek Flood Hazard Reduction Phase 1

Category: **Storm Drainage** Status: **Ongoing**
Department: **Utilities** Location: **Newport Shores Neighborhood**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
8,095,889	466,889	300,000	600,000	200,000	2,177,000	2,176,000	2,176,000	-

Description and Scope

This project will design and construct project(s) to reduce flooding from the Newport Shores reach of Coal Creek, located between I-405 and Lake Washington. A preliminary engineering study to identify and assess alternatives is underway, to establish how best to reduce flooding during storm events. The project budget includes one or more of the following: increased storage capacity at the I-405 regional pond, replacement of the five existing culverts downstream of the pond, targeted stream bank erosion protection, and improvements to the local storm drainage network. The schedule has been revised to reflect design in 2015-16; permitting in 2016-17, and construction of improvements between 2018 and 2020.

Rationale

The project, recognized as a regional need by the King County Flood Control Zone District (KCFZD), is intended to improve flood protection to the Newport Shores neighborhood. Coal Creek becomes a flooding hazard when flood waters overtop the embankments along the stream, or when existing culverts cannot convey the stream flow during major storm events. Flood hazard threat is greatest when upstream detention facilities are completely full, and begin to overflow.

Flooding is usually associated with major winter storms, is widespread, and even affects homes that are not adjacent to the stream. City records include 65 flooding instances in Newport Shores, dating back to 1994, at 25 separate addresses.

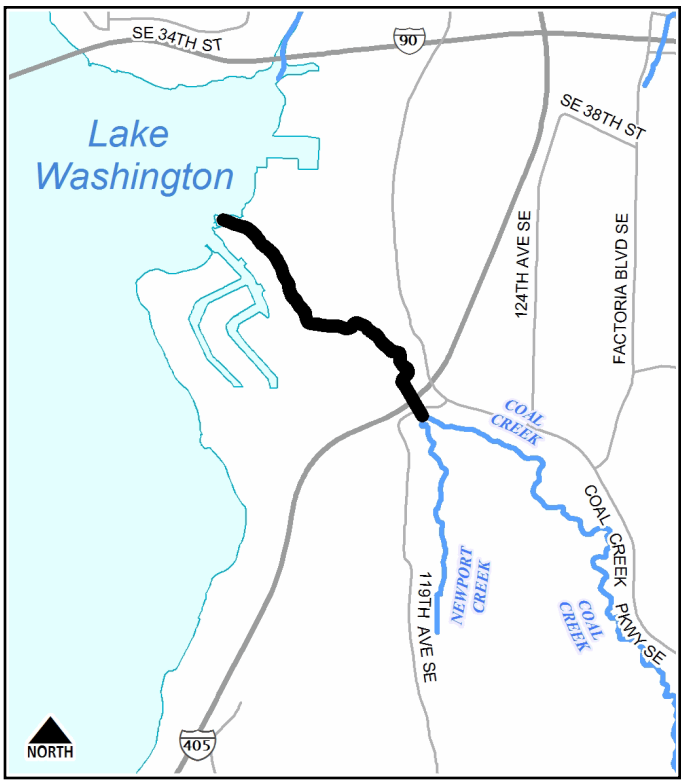
This project is included in the KCFZD's capital program, which will provide full funding for this project. Bellevue will implement the project. A later phase may include increasing in-stream conveyance capacity of Coal Creek. That work is not yet scheduled or funded in the KCFZD capital improvements plan.

Environmental Impacts

The project will require SEPA review to identify environmental impacts and appropriate mitigation. Once constructed, the project will improve environmental impacts by reducing flood-caused damage to streams and nearby properties. The riparian habitat will be improved.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2013 - 2020	8,095,889
Total Budgetary Cost Estimate:		8,095,889

Means of Financing

Funding Source	Amount
Interlocal Contributions	7,846,692
Utility Rates/Fees	249,197
Total Programmed Funding:	8,095,889
Future Funding Requirements:	

Comments

D-107 Storm Water Video Inspection Enhancement

Category: **Storm Drainage** Status: **New**
Department: **Utilities** Location: **Various locations throughout the City**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
2,503,000	-	299,000	614,000	626,000	638,000	326,000	-	-

Description and Scope

This project will video-inspect the most critical 20% of stormwater pipes to assess their condition over a five year period. Pipes to be inspected will be selected based on their likelihood and consequence of failure (risk). The video condition assessment results will be used to help evaluate the overall stormwater pipeline condition so that short- and long-term renewal and replacement needs can be more accurately estimated. The project will also be used to evaluate how much of the stormwater system should be video-inspected each year on an ongoing basis. The project funds four years of contracted services, plus start up time in the first year. It will video-inspect 10-15 miles in 2015, 25 miles each in 2016, 2017, and 2018, and 10-15 miles in the first half of 2019.

Rationale

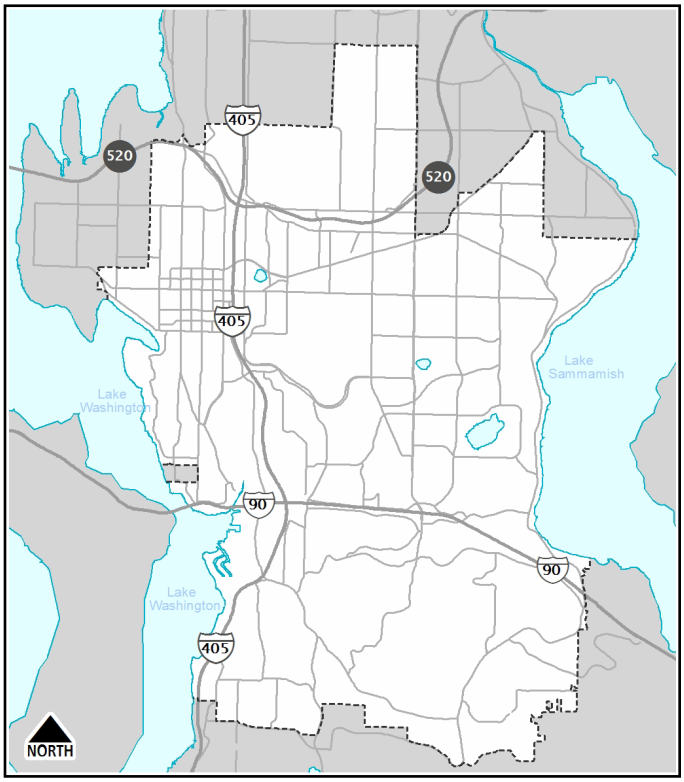
Bellevue's public storm system has 410 miles of pipes and culverts, made of many different materials and installed over several decades. Less than 15% of the system has ever been video-inspected; consequently, the overall condition of the stormwater system is unknown. Historically, only 1-2% of the system was inspected each year. This video inspection enhancement will afford a better understanding of the overall system condition, so that long term replacement resources and timing as well as maintenance requirements can be estimated; it will identify pipeline defects that are likely to lead to failure (repaired via D-64); and it will help determine the appropriate stormwater pipe video inspection rate consistent with maintaining an understanding of overall system condition and preventing pipe failures that would reduce system performance below acceptable service levels.

Environmental Impacts

The video inspection program has minimal environmental impact. Standard industry practices to clean the pipes prior to inspection will manage appropriately any water and debris.

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2015 - 2019	2,503,000
Total Budgetary Cost Estimate:		2,503,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	2,503,000
Total Programmed Funding:	2,503,000
Future Funding Requirements:	

Comments

D-108 Sound Transit East Link Corridor within Bellevue City Limits

Category: **Storm Drainage** Status: **New**
Department: **Utilities** Location: **East Link Corridor**

Programmed Expenditures

Programmed Expenditures	Appropriated To Date	FY 2015 Budget	FY 2016 Budget	FY 2017 Budget	FY 2018 Budget	FY 2019 Budget	FY 2020 Budget	FY 2021 Budget
3,145,000	-	3,145,000	-	-	-	-	-	-

Description and Scope

This proposal is for funding to pay the depreciated value of aging infrastructure replaced by new facilities as a result of the need to relocate water, wastewater, and stormwater pipelines to accommodate Sound Transit's (ST) East Link light rail project.

Rationale

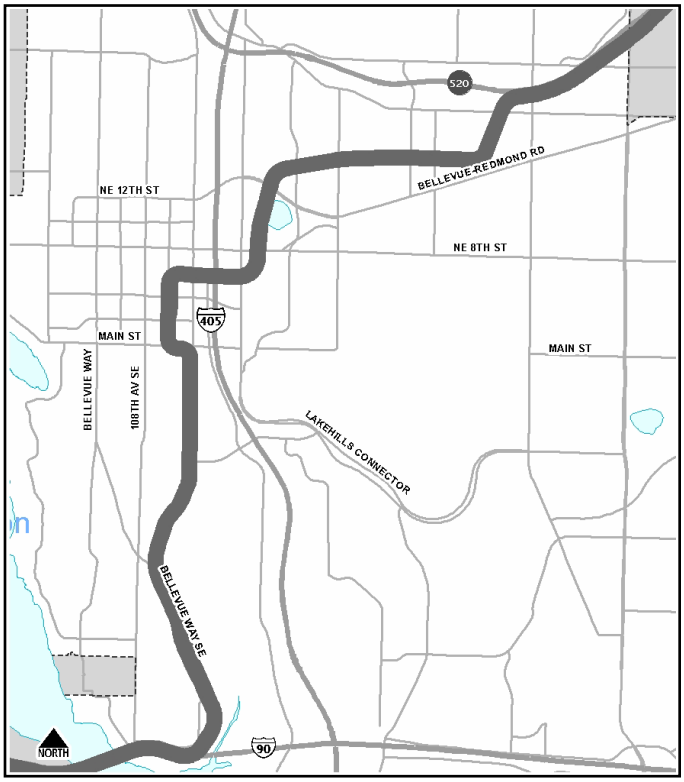
East Link is a voter approved $2.5 billion extension of light rail transit that will connect Bellevue with Overlake, Mercer Island, and Seattle. This proposal is for the Utility Fund cost associated with relocating water, wastewater, and stormwater pipelines that will conflict with the East Link rail system construction.

Environmental Impacts

This proposal supports a Healthy and Sustainable Environment by designing facilities that will ensure a continued supply of clean drinking water; reliable, safe wastewater removal; and that surface water run-off from rain and storms is controlled to minimize the impacts of high flows and flooding on people, property, and the environment. (Water and Natural Environment). Well-designed utility facilities minimize the opportunities for wastewater and stormwater pipe failures, protecting streams, wetlands, and lakes from pollution and erosion. (Natural Environment).

Operating Budget Impacts

Project Map



Schedule of Activities

Project Activities	From - To	Amount
Project Costs	2015 - 2015	3,145,000
Total Budgetary Cost Estimate:		3,145,000

Means of Financing

Funding Source	Amount
Utility Rates/Fees	3,145,000
Total Programmed Funding:	3,145,000
Future Funding Requirements:	

Comments